

## Research in Standards-based Science Assessment

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### Summary of Merit Review and Recommendation

***Note to Reader: This statement has been prepared by staff of the National Science Foundation in order to provide an illustration of the proposal review process and the award recommendation. While it draws on actual points made by the proposal reviewers, review panelists, and program officer, it is a synopsis and synthesis of the actual reviews and award decision. We recognize that all proposals and reviews have strengths and weaknesses. We therefore offer this only as an example of a “typical” set of points made for a funded proposal, and we hope this serves to illuminate the process and to provide helpful guidance to prospective investigators.***

This proposal—to conduct research on standards-based assessments in science and to study how teachers use different methods to improve their teaching practices—received strong support from the reviewers. According to the panel, the proposal addressed an important issue and the assessment team was excellent. The reviewers also felt that the research activity was well organized and well conceived and that the project could have broader impacts beyond California, the state in which it would be carried out.

On the side of weaknesses, the panel observed that the training period provided for the teachers did not seem long enough, and the evaluation of the actual teacher practices seemed limited. The panel was concerned that the after-the-fact interviews would not be sufficient, and that the proposal paid insufficient attention to validity issues in the teacher reports and interviews. [Note: The researchers agreed to lengthen the training period in response to panel concerns].

One reviewer was concerned about the rationale for creating an experimental design about assessments that teachers would use. This reviewer suggested that more intensive efforts to work with a smaller group of teachers would be more likely to improve the use of the assessments. The panel recommended that these issues be addressed by NSF staff, as the basic proposal appeared strong.

The panel members felt that this proposal merited support. The program officer concurred with the recommendation of the panel and felt that the empirical work proposed addressed a need in the research community to understand how assessments actually influence teacher behavior and student performance. The project was recommended at a funding level that reflected a small reduction from the proposed budget amount.